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JAMES HAAR (work-list with LETITIA GLOZER)

**Arcadian Academy.** Association founded in Rome in 1690 for the reform and 'purification' of Italian poetry, in particular the opera libretto. It emerged, like many such Roman gatherings, from the circles of specific patrons, in this case Cardinal Pietro Ottoboni, whose vast wealth and artistic interests both protected and nurtured poets and musicians admitted to the group. Although its members assumed fanciful academic names (Ottoboni's was 'Crateo Pradelini'), it should not be thought of as a formally constituted academy. However, its influence spread widely through Italy and abroad for several decades, in part by way of letters and tracts but also by virtue of the general commerce in opera at this period: many cities had gatherings of *letterati* variously allied to the Arcadian cause.

As the name implies, the Arcadians sought a return to classical simplicity (in part, via French models) in reaction to the abuses of contemporary poetry. Their spokesmen, Giovanni Maria Crescimbeni and Ludovico Muratori, ranged widely in their attacks on 17th-century *concretismo*: Giacinto Andrea Cicognini's libretto *Giasone* (set by Cavalli) comes under particularly harsh criticism in Crescimbeni's *La bellezza della volgar poesia* (Rome, 1700) for its mixing of genres and characters and 'the complete ruin of the rules of poetry'. Librettists associated with the Arcadian movement, including Ottoboni himself, Apostolo Zeno, Gian Vincenzo Gravina, Silvio Stampiglia and Pietro Metastasio (Ottoboni's godson and Gravina's pupil), sought to restore order to the genre by regularizing its structures, themes and affective content. Composers particularly associated with the Arcadians included Alessandro Scarlatti, Giovanni Bononcini and Leonardo Vinci. These texts and music did much to formulize the conventions of late-Baroque *opera seria*.

The various artistic and other ideals of the Arcadians are not so consistent as to be reduced to easy labels. That

reflects differences of personality and geography; the common threads (*pace* the notion of reform) with earlier Italian traditions; and the repeated difficulties found by scholars from Francesco De Sanctis onwards in giving a reasoned account of Italian literature of the 17th and 18th centuries.

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TIM CARTER

**Arcangelo del Leuto** [Arcangelo del Liuto]. See LORI, ARCANDELO.

**Arcata in giù** (It.). Down-bow. See BOW, §II.

**Arcata in su** (It.). Up-bow. See BOW, §II, 2(i).

**Arc-en-terre** (Fr.). An earth bow or GROUND HARP.

**Archadelt, Jacques.** See ARCADELT, JACQUES.

**Archaeomusicology** (Ger. *Musikarchäologie*). The application of the methods of archaeology to the study of music. Setting out from the analysis of archaeological findings, however acquired, archaeomusicology reconstructs the music and musical life of early cultures and ethnic groups that can often be dated very far back in time (Buckley, 1989). It then tries to discover features or traces of that ancient musical culture still extant in the more recent musical life of the society living in the same geographical area.

Such archaeologists as Childe (1957) and D.L. Clarke (1968) set out, if not uniformly, from the premise that the analysis of findings, that is, archaeological finds in context, was more important than the recovery and interpretation of isolated finds. Their studies concentrated on problems rather than objects (Ziegert, 1980), attempting to focus on the questions about mankind and human culture behind the actual finds. Accordingly, 'reconstruction of the historical development of human cultures [is based] primarily on the study of their surviving artefacts, buildings and biological materials'; consequently, it is 'essential to derive as much information as possible from this material, using all the methods at our disposal. In the last resort, however, all the steps in archaeological fieldwork relate to a reconstruction of past life deriving from an interpretative approach that links the finds with their context' (Maier, 1980, p.345). A similar approach may be adopted for the study and description of music and musical life in the distant past, for the archaeomusicologist deals with subjects and materials resembling or identical to those studied by the archaeologist. Both employ the same or very similar research methods.

1. Objects of research.
2. Classification and analysis.
3. Archaeomusicology and history.
4. Ethnographic analogy.
5. Typology.
6. Reconstruction.
7. Written and oral sources: (i) Complementary accounts (ii) Imaginative descriptions by contemporaries (iii) Myths and legends (iv) The oral tradition.
8. The discipline.

**1. OBJECTS OF RESEARCH.** The objects of research are items that have been excavated, from whatever cultural period they may derive (for instance, the Palaeolithic



period in Europe, a Metal Age period of China, present-day industrial archaeology in North America). Archaeomusicological artefacts consist primarily of musical instruments or parts of instruments; scenes of music-making in cave paintings, reliefs, frescoes and mosaics; more rarely, written sources such as inscriptions or descriptions of music; and, even more rarely, specimens of musical notation. The objects may be made of various kinds of material – stone, metal, pottery, bone, wood, skin, leather, bark, reeds and recently also plastic. The importance of music in ancient cultures is attested by the recovery of evidence of music-making from all kinds of archaeological finds, including those from tombs, hoards and excavations of settlements. This however varies according to the particular culture under consideration; and it is important to remember that it is not always possible to be certain of the significance of the evidence since the remains of the past do not lie undisturbed in the ground indefinitely. Archaeomusicologists, however, seldom acquire their objects of research straight from excavations in which they take part. Such items come from inventories of archaeological collections, from the study of specialist archaeological and musicological literature and from information provided by archaeologists and the general public (Lund, 1980, p.5).

2. CLASSIFICATION AND ANALYSIS. One of the aims of archaeomusicology is to classify its finds. The classification system developed in musicology and archaeology has been outlined as follows (Lund, 1980, p.7): (1) objects whose primary purpose was to produce sound, that is, musical instruments, such as bronze lurs, bone flutes, bells and jingles; (2) objects whose primary purpose was probably to produce sound, such as pig-bone bullroarers; (3) objects which, judging by analogous items, were made to fulfil more than one function (see Hickmann, 'Anthropomorphe, Pfeifen' and 'Das, heilige Signal', 1997; Koch, 1992), including that of producing sound (such as items of personal adornment made of snail-shells or bronze plaques); (4) objects probably not made with the intention of producing sound but whose construction enabled them to do so as well as fulfilling their primary function, for instance, silver or iron bracelets; and (5) items whose function is unknown but which produce sound as a result of their structure and could therefore have been used as musical instruments, for example, items of bone with carved grooves that were possibly used as scrapers (they are classified on the basis of analogy, the context of the find, the archaeomusicologist's or others' interpretation, and/or in the light of other circumstances).

This system aims to provide both specialists and amateur collectors and archaeologists with a guide to assist them in the classification and especially the assessment of finds, for the real nature of sound-producing instruments, in the widest sense of the term, often goes unrecognized in ethnomusicological and organological studies. Organological classification (such as that of Hornbostel and Sachs), and the concept of music it conveys, is not always generally understood even among archaeological experts. This preliminary system of archaeomusicological classification, however, enables a find to be further assessed, geographically, chorologically, chronologically and typologically, with the aim of locating it in a specific culture and as far as possible excluding the possibility of its belonging to others (Hickmann, 1983–4). In all cases, the study and analysis of the materials of a

find follow the measurement of its component parts. Archaeomusicology thus largely consists of the preservation, description and analysis of a music-related object in all its aspects. When the object is an instrument that can still be played, acoustic and musical investigations are carried out and the tonal repertory, range, frequency of vibrations and sound spectrum will be recorded. If the instrument is damaged, or if only rudimentary parts of it have been preserved, a replica may be made and used for these investigations. There is a growing trend to use a copy even where an instrument is well preserved. Comparison of the resulting data with those from the analysis of similar instruments may lead to more precise dating and cultural identification. Conclusions may be drawn about performing practice and the instrument's socio-cultural significance. Archaeomusicology cannot work effectively in the analysis of material or in chronological classification without drawing on other sciences; interdisciplinary work is essential (see *ICTM Study Group on Music Archaeology*, II, 1984; III, 1988; IV, 1990; V, 1992; VI, 1993; VII, 1994–5; VIII, 1996; *International Study Group on Music Archaeology*, I: Blakenburg, Hanz, 1998; II, 2000).

3. ARCHAEMUSICOLOGY AND HISTORY. The division of pre-history and protohistory into the tripartite system of the Stone Age, the Bronze Age and the Iron Age has been and remains of considerable importance in investigating many geographical regions and cultures, and it can be used with modifications for musical materials and their dating. In Europe it has been applied to finds from the area between the Danube and the Adriatic and to the north and east of that area, covering present-day Bavaria, east Germany, Poland, Bohemia, Moravia, Slovakia and Hungary (Zagiba, 1976, p.10). Following a sequence from the Stone Age (the Early Palaeolithic, the Mesolithic and the Late Palaeolithic) through the Pottery Age (the Neolithic) to the Metal Age (the Bronze Age and Iron Age), a classification system can be produced for prehistoric musical instruments (Zagiba, p.13) which not only follows this chronology but also draws on the theory of culture circles (*Kulturkreislehre*): certain instruments do not occur in the three epochs of the tripartite system forming the 'cycles' since they are linked with particular cultural developments, and there is thus a clearly demarcated distribution area (Seewald, 1934). This classification sets up three criteria: the assignment of finds (1) to their place in the course of early historic cultural cycles, and their incorporation into a system according to (2) the material of which they are made and (3) their idiophony (p.12). No 'historical picture' from prehistory can be constructed in this way; it is therefore useful for the archaeomusicologist to ask the critical questions that a historian would ask about both the evidential validity of sources and the historical picture he aims to produce. The difficulties of presenting a broad-based historical concept, in the light of the selective survival of evidence and the need for its careful processing and interpretation by people who fully understand its potentialities, has been discussed by Dymond (1964, pp.75–7). Besides a precise knowledge of the scientifically ascertained facts, whether they concern archaeological artefacts or historical circumstances, 'imagination', a certain inspirational factor, is necessary if the loose ends are to be tied up (Hodder, Isaac and Hammond, 1981; Assmann, 1996, 1997).



Ethnology and ethnomusicology are thus also involved in archaeomusicological research.

4. **ETHNOGRAPHIC ANALOGY.** To call on the lifestyle of a recent non-European and preferably 'primitive' culture to illustrate how a prehistoric community or people might have lived constitutes the method of 'ethnographic analogy' (or 'actualized comparison'). Common in archaeological studies from about the mid-19th century, and used to popularize archaeology, it was initially firmly rejected by musicologists. Continuous connections between an old musical culture and a more recent one in the same geographical area, did not become the subject of detailed musicological research until the end of the 19th century. Villoteau (1846), for instance, wrote comprehensively on the music of Egypt but did not mention documentary records of ancient Egyptian music. Reference back to ancient periods was also rigorously avoided in earlier studies of other cultures, as in Kiesewetter's of the Greeks (1858); according to Wilamowitz-Moellendorff (1921), comparison with the music of the modern Greeks and their system showed that it could not be derived from or in any way related to the world of the ancient Greeks (Becker, 1966, p.84).

Only recently has research been undertaken into historical dimensions in the cultures of peoples said to 'have no history' (Vansina, 1965, 1985; Geertz, 1973; Wolf, 1982); archaeological methods have seldom been applied. In the early 20th century the familiar historical approach whereby factors of another culture are compared with and assessed according to phenomenologically similar ones in our own still dominated the new discipline of ethnomusicology (or 'comparative musicology'); it owed much to the theory of evolution. The cultural-historical methods of culture-circle theory began to be applied around 1910, by Schmidt, who soon modified the culture-circle concept, distinguishing between the culture circle as a methodical means for establishing as objectively as possible complex genetic and historical cultural circumstances and their sequence, and the culture circle in its order of being, as a former tribal culture. Its elements should go back to a uniform origin, a primitive culture that was dispersed by migration over large areas. All that could be grasped in concrete terms was the culture circle in its order of being, following a schematic pattern (see Schneider, 1976, pp.44–5). Comparative musicology soon adopted this theory.

The outstanding work of the time when it was in use was Curt Sachs's *Geist und Werden der Musikinstrumente* (1929), in which Sachs sought to describe the entire known range of musical instruments from all over the world. He set out from what he took to be an established fact: 'that all the instruments of primitive and developing cultures, including the high cultures of the American continent and east and south-east Asia, were derived from a few centres, the most important and productive of which are to be sought in central Asia' (p.5). The further away a musical instrument is found in use, the older it must be, for the representatives of such far-flung cultures must have been among the first migrants and their cultural assets among the earliest exports. Ethnologists saw similar forms and functions as the correlates of objects to be observed in distant ethnic units. Observation, comparison and the study of distribution should enable us 'to draw conclusions about the structural stratification of human culture and so about its history' (p.4). The hypothetical

relative chronology that Sachs developed, however, kept conflicting with his historical awareness.

Even before Sachs wrote *Geist und Werden*, methods of ethnographic analogy had been employed in comparative musicology, for instance in d'Harcourt's *La musique des Incas et ses survivances* (1925). Only later generations, however, saw a broad-based opportunity, in the form of actualized comparison, to trace connections between traditions and construct a historical picture of pre- and protohistorical European and non-European music on the basis of archaeomusicological finds (for instance H. Hickmann and C. Grégoire de Mecklembourg, 1958; C.-H. Mahling and S. Wiesmann, in *IMSCR*, 1981; Schneider, 1984; E. Hickmann, 1985; and Olsen, in *ICTM Study Group on Music Archaeology IV*, 1988; and May, O'Dwyer, Purser and Schumacher in *International Study Group on Music Archaeology, I: Blankenburg, Hanz, 1998*).

5. **TYPOLGY.** It is often difficult, if not impossible, to date musical objects precisely. In the past, archaeologists in charge of excavations frequently failed to keep detailed records; sites were often damaged and objects destroyed. Typology, 'the process of determining the location of a find within a developmental sequence from its form, decoration and style, and thus assigning it a relative date' (Maier, 1980, p.269), which today is no longer a new approach and indeed has largely fallen out of favour, used to be among the methods employed for placing finds within a relative chronology and thereby studying historical dimensions in depth, even in the absence of written records. However, typology 'regarded as the sole infallible method was soon misused, and was thus discredited' (p.271), and in any case there were many finds to which it could not be applied. Few conclusions could be drawn about musical instruments and other music-related archaeological evidence from this strictly formalistic method; there were too many other parameters. In 1949, however, Broholm, Larsen and Skjerne successfully used typology to establish a relative chronology for northern European lurs (see also *ICTM Study Group*, 1986, ii). Although the method could be used to some extent to establish a chronology for Neolithic pottery drums or Metal Age rattling ornaments, it failed to provide chronological information on such items as bone flutes or string instruments.

6. **RECONSTRUCTION.** Besides using analogy in the shape of actualized comparison, and setting out from that point, archaeomusicology employs methods of the retrogressive study (reduction) and retrospective projection of music-related evidence to reconstruct aspects of musical life and practice.

Retrogressive study with reduction entails establishing as closely as possible the location in past centuries of an instrument or a musical practice. The aim, not the point of departure, is the discovery of the earliest possible archaeomusicological artefact; present-day musical instruments and practices are the point of departure, not the aim (Becker, 1966; May in *International Study Group on Music Archaeology, I: Blankenburg, Hanz, 1998*). This approach has not yet often been used because methodological problems arise in the tracing of musical practices back in time. Scholars may study modern instruments in detail, but when embarking on a historical account they usually begin with the earliest known records



from the region concerned (Lawergren in *International Study Group on Music Archaeology, I: Blankenburg, Hanz, 1998*). Quotations and analyses of evidence between these extremes derive from literature, not the archaeomusicologist's own analysis, for the objects themselves are usually unavailable. In later history, moreover, archaeologically documented instruments whose function is difficult to determine have usually been folk instruments, and few specimens are preserved (*Studia instrumentorum*, 1973); an example is the rattle, for which there is archaeological evidence from many parts of the world although it has not passed into written records or iconography (Hickmann and Jänichen, MGG2). Museum collections illustrating traditional cultures were not generally built up before the mid-19th century. An impressive example of the reduction method is Alexandru's study of Romanian panpipes (1984): Gheorghiu Zamfir's playing of the panpipes provides his point of departure, and he mentions the virtuoso playing of Romanian performers in the earlier 20th century and their performances in Russia in the 19th, detects their influence in scores by 19th-century Russian composers, traces the panpipes back to the 15th century in Romania through terminological and iconographic studies and so comes to the earliest archaeological evidence, from Roman times. Weis Bentzon used a similar approach in his study of the Sardinian triple clarinet, the launeddas (1969), tracing it back to the double clarinets of Pharaonic Egypt (pp.28–9).

Retrospective projection provides fewer opportunities for error: it consists of relating a modern musical instrument or practice to what are sometimes very early archaeological artefacts without involving relevant sources (generally yet to be found) in the great spans of time between the two objects. The aim is less to discover what a musical practice was like than to ascertain that it took place, and did so in a way similar to modern practice. Alice Moyle (1981) has compared the Australian didjeridu with cave paintings from Arnhem in northern Australia which are about 1000 years old and show several typologically different players. Terminological investigations, studies of the material of which modern instruments are made, of regional distribution, of the player's handling of the instrument and the way it was held as compared with modern practice, led to the conclusion that other customary musical elements have been preserved along with performance on the didjeridu, for instance the use of certain idiophones as they feature in the words of songs. The author drew these deductions from early wax cylinder recordings, and shows how points relevant to historical development can be made by retrospective projection. Given further chronological data, the length of time occupied by the sequence might also be determined, and another step would have been taken in the writing of musical history.

7. WRITTEN AND ORAL SOURCES. Depending on the approach to archaeomusicological facts of past or present, four groups of sources can be distinguished.

(i) *Complementary accounts.* These arise when a writer is personally acquainted with the object he is describing and deliberately makes it the subject of his account. The object may be contemporary with him or already in the archaeological past. The writer provides a complementary account which adds to our idea of the find. Examples are Hero of Alexandria and Vitruvius in Rome, who give detailed descriptions of the hydraulis or water organ in

the 1st century BCE. The instrument was later depicted in mosaics, on coins and in frescoes of various periods; archaeological evidence in Aquinum has been dated to 228 CE (several instruments were reconstructed from the fragments). There is further archaeological evidence for the hydraulis in Switzerland (3rd century CE) and in Dion (1st century BCE; see Jakob, MGG2); the instrument was still in use in the 3rd century. The writers mentioned credit the Alexandrian engineer Ctesibius (fl 283–246 BCE) with its invention and the Roman historian Ammianus Marcellinus confirms that it was played in the circus in the 3rd century CE (Fleischhauer, 1964; Wille, 1967). In the 8th and 9th centuries Arab scholars translated the writings of classical antiquity, especially those of the Greeks. Muristus gives an account of the organ accompanied by a drawing showing its construction (Farmer, 1931), but we have no archaeological evidence indicating whether it still existed. The depiction in the 9th-century Utrecht Psalter may not be organologically accurate. Another instrument known as the organ or *organum* may have existed in Europe. In the case of the hydraulis, given references and descriptions in Hellenistic and Roman sources indicating its use in performance along with other instruments, it has been possible to reconstruct musical practices connected with it in a way that must come very close to the real facts.

A good example of the primacy of archaeological objects and the way in which archaeology and written information interlock comes from the cultures of East Asia. China, for instance, still has the *qin* (zither), which seems to be first mentioned in writing (if not by name) in the *Liji*, a compilation of philosophical, religious and ethical ideas from the time of Confucius (although the work itself was probably written much later, in the 1st century BCE). The first pictorial depiction of the instrument is probably in a relief on the tomb of Emperor Chien in the western province of Szechuan (early 10th century). As Chinese archaeologists point out, it is their own practice to date archaeological periods well into historical times, so that in many parts of China archaeological finds can be said to provide a picture of real life at certain periods of regional Chinese history (K.-C. Chang, 1977). The classification of instruments in the *Liji* can be applied to a range of instruments still preserved intact and in use. This Chinese system classifies instruments according to the materials of which they are made: (1) metal (bells): *bo*, *zhong*; (2) stone (lithophones): *qing*; (3) earth – pottery, clay (globular six-hole flute): *xun*; (4) leather (drums); (5) silk (zithers): *qin*, *se*; (6) wood (mortar for grinding rice, beaten on the insides at the beginning of cult ceremonies): *zhu*; (7) gourd (mouth organ): *sheng*; (8) bamboo (flutes): *guan*, *xiao*, *paixiao* (panpipes). In this case, as the old system of classification by materials indicates, archaeology can be directly visualized.

(ii) *Imaginative descriptions by contemporaries.* In this case the author does not know the object he is describing, or does not know it well. The archaeological findings are already part of the past. Accordingly, one must expect to find mistakes that can no longer be corrected because they were made by authors of same period as the artefacts: for instance, accounts from missionaries ignorant of music and impeded by a variety of prejudices (see Hickmann, 1990). Archaeomusicological material and descriptions of music from late antiquity have also been preserved. The geographical and cultural environment of Hellenistic



Alexandria, where a wide variety of cultural elements met, at a later date mingling and becoming superimposed on each other (especially in the case of syncretist religions), contributes to the confusing quantity and typological variety of objects that have been preserved (Hickmann, 1987). Travellers, traders, priests of oriental cultures and the early Christian church and scholars (including philosophers, lexicographers and historians), all of whom wrote their impressions, were of origins as diverse as their educational standards, and their classification and interpretation of many contradictory processes and phenomena eludes comprehension. It is difficult, then, to match archaeomusicological artefacts to written sources, since one cannot tell which instruments are meant. The written sources themselves are imprecise and imaginative. This group includes Jewish and late Babylonian references to music in ancient Palestine, often handed down to the present day, although their accounts are distorted (Hammerstein, 1959; Avenary, 1961; Wohlenberg, 1967). Finds of musical instruments and depictions of musical scenes in Palestine are rare and attempts to identify them by comparison with biblical allusions have had little success (Bayer, 1963; Braun, MGG2; Braun, 1999; *see BIBLICAL INSTRUMENTS*).

(iii) *Myths and legends.* These accumulate around an instrument of the archaeomusicological past. It is not clear whether the authors, usually anonymous, knew the musical object themselves. Myths and legends may be regarded as end-products of oral tradition. They are most productive of historical content when the prehistory of the culture that produced them continues far enough into historical times for outsiders to record them, so that they can be checked as written versions of an extant oral tradition. The process sometimes still continues in areas of the Andean cultures of South America (Hickmann, in *GfMKB*, 1981). An example is the Colombian legend of El Dorado in which the cacique of the Muisca tribe takes presents to his wife, sunk beneath the waters of Lake Guatavita, a ceremony accompanied by music. The scene of the cacique navigating the lake with his subjects on a large raft has been depicted many times in pure gold and in greatly reduced format. Two of his companions carry rattles and some depictions also show wind instruments. Pipes, flutes and trumpets, as mentioned in the legend, are among the archaeological finds of Colombia, and numerous accounts by missionaries and European conquerors relate how the instruments were played. Even when their accounts of the instruments are wide of the mark, and they condemn the dances as heathen magic, these descriptions, together with the legends, provide ample confirmation of the way in which archaeomusicological finds were used and their significance in musical life. The El Dorado legend is thus an ideal example of this way of investigating the sources. Another instance concerns the many legends constructed around the sounds and functions of early Christian handbells in the mission to Ireland (Hickmann, 'Das heilige Signal', 1997; Purser, in *International Study Group on Music Archaeology*, I: *Blankenburg*, Hanz, 1998).

(iv) *The oral tradition.* It is not clear from the transmission process whether the person passing on the information was actually acquainted with the archaeological object. Sources of error in this group are inadequacy of concept and erroneous or misinterpreted information. From criticism of the sources, and the results of compari-

son with archaeological and written sources, it can be concluded that the information value of written sources through oral transmission, as systematically and traditionally practised by ethnologists, is probably not inferior to the oral tradition itself in reliability. In fact, in both written and oral transmission, the composition of individual impressions and the equally individual selection and interpretation of facts is the material of which history is made. The crucial difference lies in the concept of historical retrospection: oral tradition, experiments have shown, cannot be traced back for more than three generations. In his diagram illustrating both its potential and its limitations in east African societies, Wachsmann sets out from the researcher's own typical behaviour patterns and methods of inquiry, and assumes that a researcher will be interested in the following subjects and circumstances, in this order: (1) tendencies and requirements arising from the immediate environment; (2) biographical data; (3) stylistic musical evidence; and (4) terminological questions: the researcher will acquire the necessary information on the basis of the answers and on planes of investigation aiming at the following observations: (a) the direct observation of processes in musical history, increasingly related to the past; (b) the informant's personal memory; (c) the informant's report, comprising hearsay and legends; (d) historical examination of accounts by travellers and others, datable archaeological evidence; and, following on from the last point, (e) working hypotheses and speculation on longterm developments (Wachsmann, 1971, p.96). The archaeological record itself is thus called upon only when all other means of investigating traditions and historicity in a society which has no written language are exhausted. It seems that all historical evidence should be interpreted before going back (or forward) to the archaeological artefact or findings. Bearing in mind modern archaeological techniques of excavation and analysis, and the wealth of objects in museum collections, it may be that a three-dimensional picture of the music and musical life of a series of cultures could be reconstructed solely and unilaterally from archaeological working methods, and that such a picture could supplement the written information. Changes in attitude and experience mean, among other things, that archaeological finds are now interpreted as evidence of human life in the past and are not studied solely for their value as artistic or utilitarian objects.

8. THE DISCIPLINE. Archaeomusicology has existed as long as music history, that is, ever since anyone began writing about the musical instruments and performing practices of the past. Chroniclers of cultures, however, make only passing references to instruments in the distant past; moreover, few authors have themselves seen the evidence preserved *in situ* or even in collections. As far as Europe is concerned, it is not known whether or how closely those who wrote about proto-historic and classical Mediterranean civilizations were familiar with the instruments of their past and present (Hickmann, 1987; and *see* §8(ii) above). But the early Church fathers of the eastern Mediterranean area knew exactly what they were condemning when they fulminated against the cult music of their environment. Through them and their interest in the musical customs of their time a good deal of knowledge has come down to modern archaeomusicologists, as it also has from Greek and Roman authors of the centuries around the time of the birth of Christ, writing from their



own points of view. However, even if it is assumed that religions with their musical instruments and musical practice lasted longer in the Roman provinces than in Rome itself or in Alexandria, by the 6th and 7th centuries, when Isidore of Seville (*d* 636) was writing his encyclopaedic work, the *Etymologiae*, Roman culture had died out. Many misunderstandings of an organological or terminological nature, some of them connected with tradition, come from the writings of this period. Pseudo-Jerome's famous letter, from the mid-9th century (*Epistola ad Dardanum*), describes a purely speculative range of instruments with no archaeological equivalents, and the account it gives of their sounds is wholly imaginary (Hickmann, forthcoming). Meanwhile, plainchant had developed throughout the Western Churches. Nothing is known from the period about instruments that might now be regarded as archaeomusicological evidence, and in the area around Alexandria (by then long since destroyed) and ancient Egypt in general an independent musical life was obviously in existence, using instruments entirely different from those known to classical antiquity (Hickmann, 1987). In part this style of music was developed by the earliest Christian Coptic communities (Eichmann, 1994).

Very few European instruments are extant from the period of the migrations of nations and the early Middle Ages. Generally, only fragments have been preserved as archaeological artefacts; they are being studied and reconstructed by archaeomusicologists (see EUROPE, PRE-AND PROTO-HISTORIC). The Middle Ages often provided their own descriptions and interpretations of musical instruments and practices mentioned in the Bible. The educational canon of classical antiquity, still being passed on until the 17th century, also imported into the textbooks some knowledge of ancient music, the names of instruments and their religious and cult connections. However, this was dead knowledge that failed to take account of archaeological findings, and it seems to have been unusual for writers (such as Kircher) to have known about them. The 18th century brought a great many treatises on 'antiquities', including musical ones. An interest in the ancient world became fashionable, especially after the publication of the writings of Winckelmann, in particular his *Geschichte und Kunst des Altertums* (1764), and the development of Egyptology that followed Napoleon's campaigns. Outstanding works on musical instruments of antiquity and biblical times include Blanchinus's treatise (1742) and Ugolino's collection of 40 tracts on biblical and ancient musical instruments (1767). Many of these accounts, more particularly their illustrations, belong to the realm of fantasy (Hickmann, forthcoming), an approach corrected only towards the end of the 19th century by scholarly editions of texts and confrontation with the archaeomusicological facts. Still in the 19th century, Fétis came close to an archaeomusicological approach when he remarked that 'les recherches archéologiques' could contribute to extending knowledge of the instruments of antiquity (*Histoire de la musique*, 1869, p.9). The first to use the term 'archaeomusicology' was Estreicher in his review (1947) of Sachs's *The Rise of Music in the Ancient World East and West* (1943), describing it as 'a considerable contribution to archaeomusicology' (or *Musikarchäologie*). At this point the term tentatively entered musicological discussion, as it already had in Sweden where the musical materials in any case

consisted largely of archaeological items (see de Geer, 1985; Lund, 1987).

As a discipline partaking of both musicology and archaeology, and focussing on the study and evaluation of archaeological objects, archaeomusicology is thus a relatively new discipline. It was not until the 20th century that scholars recognized the need for precise investigation, interpretation and description of the objects themselves, for making replicas where possible, and for the use of whatever iconographic and written sources were available to supplement illustration of the various connections. It was however some time before such an approach was described as archaeomusicological research, although the conditions for its acceptance were present (see for instance the publications of Hans Hickmann, esp. 1949, 1956 and 1961, and many monographs, such as those by Zagiba, 1976, and Broholm, Larsen and Skjerne, 1949). At the 1977 International Musicological Society congress in Berkeley there was some reluctance to give a Round Table the title 'Music and Archaeology'. A Study Group on Archaeomusicology was formed at the ICTM congress in 1981 to promote international archaeomusicological research, and this group was recognized in 1983 by the executive committee of the Council as the Study Group on Music Archaeology, from 1997 on independent of the ICTM as Instrumental Study Group on Music Archaeology (see conference proceedings of 1984, 1988, 1990 and 1998). A Music Archaeological Bulletin appeared in 1984-6, succeeded until 1990 by *Archaeologia musicalis*. Archaeomusicology is now recognized as a scientific field in many parts of the world.

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Arched viall. See SOSTENENTE PIANO, §1.

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